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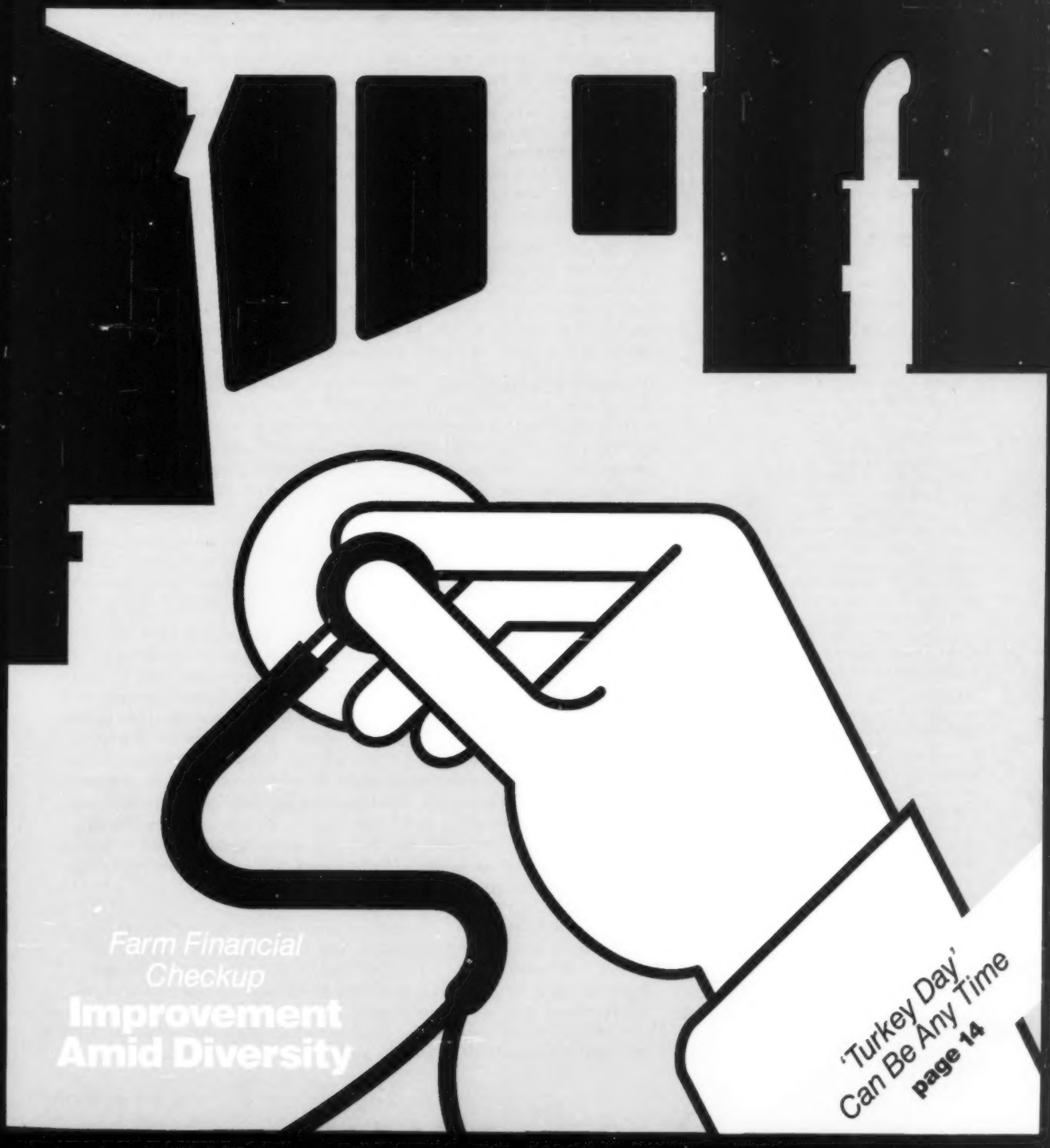

*Farm Financial Checkup*

**Improvement Amid Diversity**

'Turkey Day' Can Be Any Time

page 14

**Editor**
Jack Harrison

**Assistant Editors**
Doug Martinez
Juliana King

**Editorial Assistant**
Martha R. Evans

**Art Director**
Richard J. Barnes

(202) 786-1494

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# PERSPECTIVES

**NEW TRADE LEGISLATION** now being shaped in a congressional conference committee could have long-term implications for U.S. agriculture, according to many observers. Congressional leaders say their goal is improved U.S. competitiveness and a tougher U.S. response to unfair trading practices by our competitors.

Critics say provisions in both House and Senate bills could create problems for U.S. agriculture and might result in retaliation by some of our best customers, just when our export situation is improving. In fiscal 1987, farm export volume was up about 18%, to an estimated 129 million tons, and export value rose around 6% to $28 billion. The President has said he will veto any bill he considers protectionist.

The Gephardt Amendment to the House bill would mandate reductions in large trade surpluses by countries engaging in unfair trade practices. If negotiations to trim such surpluses were unsuccessful, U.S. tariffs and quotas would be used to bring about reductions. Both bills would restrict the President's flexibility in dealing with trade issues, says Mark Smith, an economist in USDA's Economic Research Service.

The Senate bill would expand the marketing loan program to cover wheat, feed grains, and soybeans in 1990. Smith points out that this provision would take effect if Congress has not approved a multilateral trade agreement on agriculture. (Marketing loans can lower prices of U.S. commodities by allowing producers to repay their government commodity loans at rates near world prices when those prices are below loan rates.)

Extending the Export Enhancement Program also is called for in both the House and Senate bills. (However, USDA officials announced several months ago that they planned to continue the EEP with funds from other sources if necessary.) The EEP has stimulated increases in exports of some U.S. farm commodities by making them more price competitive.

A recent ERS study indicates that agriculture could be a loser, depending on what strategies are used to reduce U.S. trade deficits with some major trading partners. Analysts Nancy Schwartz and Barry Krissoff found that this might occur if other countries cut trade surpluses by reducing tariff and nontariff barriers on only U.S. manufactured goods, or if the United States imposed retaliatory restrictions on foreign manufactured goods coming into this country. Though trade balances would improve, U.S. farm product sales might be hurt, because of the probable strengthening of the dollar. The study did not look at possible effects of foreign retaliation or of changes in U.S. or foreign agricultural policies. However, it concluded that a balanced approach toward reducing protection in both agricultural and nonagricultural products would be necessary to avoid penalizing agriculture.

Special note to readers: For more discussion of important trade issues, plan to join us for OUTLOOK '88, USDA's annual Agricultural Outlook Conference, Dec. 1-3 in Washington, D.C. Top government and industry analysts will focus on 1988 agricultural prospects and trade issues. There's no charge to attend. If you can't make it, cassette tapes will be available. For information, call (202) 447-3050, or write OUTLOOK '88, Room 5143 South Bldg., USDA, Washington, DC 20250-3800.

# FARMLINE

*AGRICULTURE . . . NATURAL RESOURCES . . . RURAL DEVELOPMENT*
*Practical economic intelligence from USDA's Economic Research Service*

## FEATURES


**Farm Financial Profile Details Improvement, Diversity** *by Eric Van Chantfort* 4

Economists are cautiously upbeat in their latest analysis of financial conditions in the farm sector. They add, however, that an accurate picture must reflect the diversity within the sector, and the uncertainties that accompany dramatic change.

**Wanted: Policies to Cope With Differences in Farming Regions** *by Doug Martinez* 11

Striking regional differences in U.S. agriculture are evident from a study of nine selected areas of the country. ERS economists say that, for best results, farm and rural policies should take this diversity into consideration.

**Appetite for Turkey Still Growing** *by Juliana King* 14

Both production and consumption are increasing, as the raising and processing of the traditional Thanksgiving treat become more specialized and concentrated among a small number of large firms bent on expanding the market with new turkey products. With a large supply of turkey on hand, the profit outlook for the near future is uncertain.

**Policymakers Ponder Shifts in Excess Capacity** *by Jack Harrison* 16

Excess capacity in U.S. agriculture has been increasing, according to a method of measurement that economists have recently developed. The analysts say that some excess capacity may be needed for lean years, but how much is needed and what should be done with the remainder?


## DEPARTMENTS


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# Farm Financial Profile Details Improvement, Diversity

If pressed, analysts with USDA's Economic Research Service will summarize their latest financial profile of the farm sector in a few cautiously upbeat sentences.

The evidence, they say, points to greater stability and "slowly improving financial conditions in the farm sector." All in all, the data seem to confirm earlier indications that the agricultural economy is gradually pulling itself from the depths of the recession that struck in the first half of the 1980's.

But economist Mitch Morehart and his ERS colleagues would quickly add that this single, simple message is, in many ways, a misleading one.

Agriculture is a diverse industry still in the midst of a very difficult adjustment. An accurate financial picture must reflect the diversity within the sector, as well as the uncertainties that accompany dramatic change.

Financial conditions vary among different types and sizes of farms in different situations, Morehart explains. Not all farmers were equally stung by lower product prices, declining exports, and falling land values during the last several years. Today, not all are sharing equally in the recovery.

Even the overall picture of the farm economy is complicated by mixed signals. Some measures of the industry's health have improved only in the sense that their rate of decline has slowed, while other measures that have moved more decisively into the positive range might later be stalled by the unknowns that lie ahead.

To Morehart and his colleagues, the diversity and the mixed signals are the important part of the story. It is the details, not the generalities, they insist, that hold the key to responsive farm policies, appropriate actions by lenders and other service sectors, and well-informed decisions by farmers themselves.

To tell that story, the economists rely both on aggregate measures of farm sector income, assets, and debts, and on farm-level information collected from the nation's

*It is the details, not the generalizations, that hold the key to responsive farm policies.*

producers through the Farm Costs and Returns Survey. The survey is conducted each year by USDA's National Agricultural Statistics Service and its state offices. *(See related article on page 8.)*

The latest survey was taken early this year and provided data covering 1986. According to Morehart, it allows analysts to distinguish how financial conditions differ among various types of farms in various locations, and to then report that information to policymakers, farm groups, and the public.

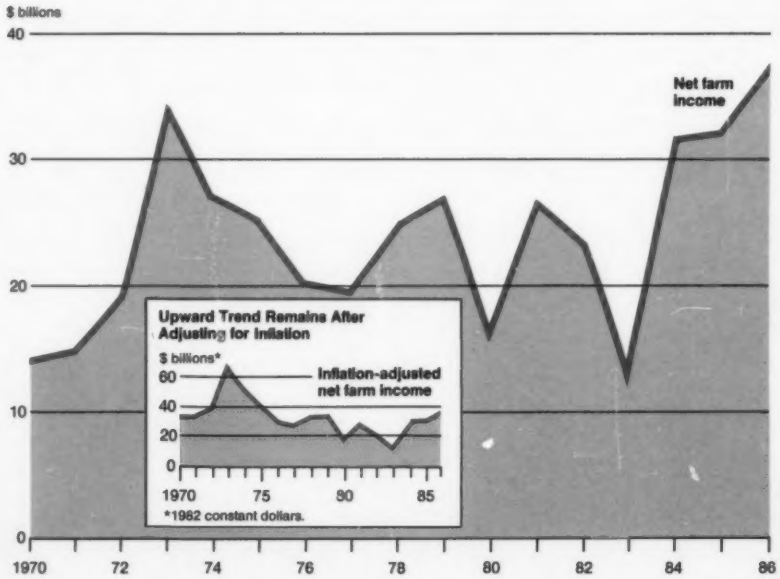
### First, the Big Picture

Even in agriculture's best and worst years, overall measures of financial performance do not present a perfectly uniform picture. However, among last year's mixed signals, analysts found a basis for some solid optimism about the farm sector's current direction.

Net farm income rose by an estimated $5 billion, reaching a record-high $37.5 billion. After adjustment for inflation, the figure was roughly equal to the levels of the late 1970's. Net cash farm income (which excludes depreciation, the value of inventory changes, nonmoney income, and repayment of debt principal) followed a similar pattern, also setting a record in current dollar terms and, after discounting for inflation, reaching its highest level in a decade.

Furthermore, says Morehart, "our forecasts indicate that both net farm income and net cash farm income may rise again this year." The credit will go to lower production expenses, higher government payments, and increased livestock receipts.

**One of the Brighter Signs: Record Net Farm Income in 1986**



Farm debt fell by a record amount, $18 billion, in 1986. Although asset values continued to drop—down another $61 billion to $693 billion at the close of last year—the rate of decline slowed. The key reason was the slowing decline in farm real estate values as rates of return on farmland increased and the outlook for farm profitability brightened.

These asset and debt movements had an impact on the sector's debt-asset ratio and its total net worth. After climbing steadily for 6 straight years, the 1986 debt-asset ratio (debts as a percentage of assets) took its first, small downward turn. In 1985, the ratio hit 23.2 percent, the highest ever.

Net worth (owner equity) fell to $536 billion, its lowest level since 1970. However, if farm real estate prices stabilize and asset values turn upward this year as forecasters expect, "owner equity may well increase," says Morehart, "in another major reversal of the pattern set so far in the 1980's."

**Potential Pitfalls and Spoilers**

Not surprisingly, the favorable indicators are accompanied by several important qualifiers and cautionary notes.

The record farm income levels, and the outlook for further gains, depend heavily on direct government payments and recent declines in production expenses. Receipts farmers earn in the marketplace are still slipping.

From 1985 to 1986, farmers' total cash receipts dropped $8 billion, despite higher earnings by livestock producers. Net income was up primarily because production expenses fell $11.6 billion and direct government payments under the commodity price support programs rose $4 billion.

To emphasize the fragile nature of the current, early phases of recovery, Morehart raises a few possible scenarios. Consider, he says, how quickly favorable prospects might fade if direct government payments to farmers were to decline significantly, or if a sudden runup in fuel prices or interest rates were to reverse the downturn in farm production expenses.

He also notes that while reductions in expenses and debt are healthy signs for the sector, these statistics partly conceal the cost to input industries, lenders, and farmers themselves. More idled acres, more efficient use (and lower prices) of inputs, and curtailed capital expenditures represent lost sales for dealers and manufacturers of farm machinery, pesticides, fertilizers, and other inputs. Some of the drop in debt represents losses to lenders who have had to write down, or write off, nonperforming loans.

Finally, lower debts and expenses reflect sacrifices made by farmers—land sold off to reduce debt or idled to qualify for government programs, meager profits plowed back into debt repayment, and postponed expenditures for a new tractor or family car. Improved financial indicators also partly reflect the "shakeout" that had already occurred before 1986 began, as farmers with the most serious problems were forced out of farming.

"Many farmers who relied heavily on debt financing to enter agriculture or to expand in the late 1970's or early 1980's are still in a very tenuous position," says Morehart. For the majority, though, 1986 was probably a better year.

"Most farmers had adequate income to meet principal and interest payments, and other financial obligations," he says. "Rates of return were up, farmers had more breathing room to handle their cash commitments, and many recorded what may have been their first profit in the last few years—a profit that typically went to pay off some debt, rather than to buy a piece of machinery or some additional land."

**Getting Down to Specifics**

At this point, Morehart and his colleagues turn to the data provided by the Farm Costs and Returns Survey. The survey allows them to look beneath the generalities for answers to such questions as how many farms continue to face serious financial difficulties, who's holding the debt or caught in a cash flow squeeze, and how different types of farms in different locations are faring.

Although their complete analysis involves a large number of financial measures, many of their key observations are drawn from a few basic measures. Using survey results for 1986, the economists found that 68 percent of the farms reported positive net farm incomes (a measure of long-term profitability), and 53 percent reported positive net cash farm incomes (a measure of the short-term earnings position of the farm business).

These figures improve substantially when small, typically part-time farms are removed from the picture. For commercial-size farms with sales of $40,000 and up, more than 80 percent had positive net cash incomes, up from 78 percent in 1985. The gain from 1985 to 1986 can be traced to reduced operating and interest expenses and to larger government payments.

"Midsize farms apparently gained most from the increase in payments, probably because of the concentration of farm program commodities, such as grains, on these farms," Morehart says.

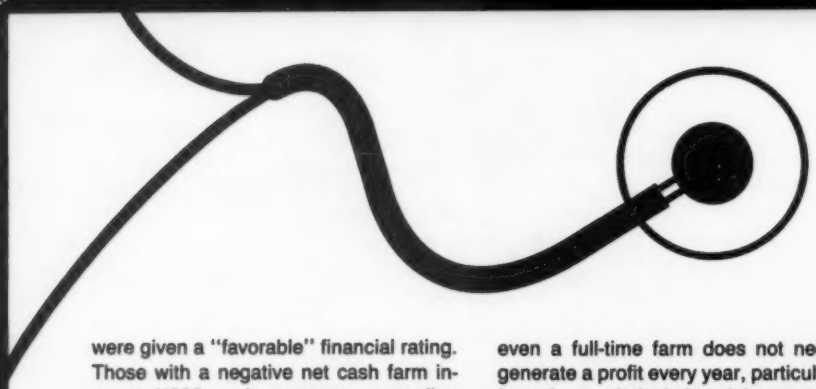
On the debt side, nearly 39 percent of farms (mostly smaller farms) entered 1987 free of outstanding liabilities. Another 39 percent had debt-asset ratios of less than 40 percent. That's the point above which debt can become difficult to manage, according to the economists.

At the other extreme, 3.7 percent of farms were technically insolvent, with debts that exceeded the value of their assets, down slightly from 4.0 percent at the beginning of 1986. Average debt-asset ratios ranged from 10 percent for the smallest farms to 31 percent for farms with sales of $250,000 and up.

**The Strong and the Stressed**

To provide some quantitative yardstick of the extent of financial problems in the sector, the analysts divided the farms into four groups by combining two measures: net cash farm income and debt-asset ratios.

Farm businesses that generated a positive net cash income and carried debts adding up to less than 40 percent of their assets



*Survey data suggest that medium-size commercial farms may be the most vulnerable.*

were given a "favorable" financial rating. Those with a negative net cash farm income (1986 cash expenses exceeding cash receipts) and a debt-asset ratio of 40 percent or more were classified as "vulnerable."

The farms in between fell into two groups. In one group were those farms with a positive 1986 income but a "marginal solvency" rating—a debt-asset ratio of 40 percent or more. In the other were farms with a debt-asset ratio below 40 percent, but a negative income.

Of the nearly 1.6 million farms represented by the survey sample, 41 percent were in a favorable position, with both a positive income and a low debt-asset ratio. Ten percent were classified as vulnerable, with a negative income and high debt-asset ratio. On average, 48 percent of their gross cash income was needed just to service their debt, compared with 7 percent of gross cash income for farms in a favorable position.

To increase their earnings, these vulnerable farms may have to reduce their operating expenses, restructure their enterprises, and further delay capital expenditures. Partial or complete liquidation of their assets may ultimately be necessary.

Yet, if the prognosis is poor for some of them, many are likely to survive, says Morehart. A number of factors could contribute to their survival, including a recovery in their incomes, adjustments ir their debt by lenders, or their ability to subsidize their farm accounts with off-farm income, he notes. In fact, 60 percent of all the vulnerable farms were small farms with sales of less than $20,000 in 1986. These units typically have large off-farm incomes.

About half the farms fell in between the favorable and vulnerable positions, with either negative incomes or high debt loads, but not both. They may or may not be headed for financial difficulties. It depends.

Consider, first, those farms with negative incomes. While full-time operations cannot sustain losses indefinitely, many families managing small farms can, because most of their income is earned off the farm. And even a full-time farm does not need to generate a profit every year, particularly if it carries a relatively low debt-asset ratio. The unencumbered assets can be used as security to attract short-term loans needed to meet cash shortfalls.

Similarly, high debt alone is often not a problem, if debt is used wisely to generate high returns, Morehart explains. Many large and very profitable farms consistently carry high debt loads.

### Where Problems Persist

That point, in fact, is reinforced by survey data, which can be used to examine how income and debt situations vary by sales classes, regions, and types of farms.

Thirty-three percent of farms with sales of $500,000 or more in 1986 were in a marginal solvency position. This was a higher percentage than in any other sales class. On the other hand, only 7 percent of the large farms were listed as vulnerable, one of the lowest percentages of any sales class. An additional 10 percent had negative incomes but low debt-asset ratios.

As might be expected, income problems were more prevalent for the smaller farms and increased steadily in each sales class below $100,000. Different income measures, however, lead to somewhat different conclusions about where the vulnerable farms were concentrated.

Net cash farm income figures suggest that the highest levels of vulnerable farms were in the under-$100,000 sales classes. In contrast, net farm income (the longer term profitability measure) and net cash farm household income (which counts off-farm income and deducts estimated principal repayments) indicated that vulnerability rates were highest among the medium-size commercial farms with sales between $40,000 and $499,999.

In this case, the latter measures may be the more meaningful indicators, says Morehart. These midsize farms are less likely than smaller farms to have substantial off-farm incomes, and less likely than large farms to generate a steady income sufficient to cover depreciation of their capital stock, debt repayment, and their family living expenses.

### Focus on Regions and Farm Types

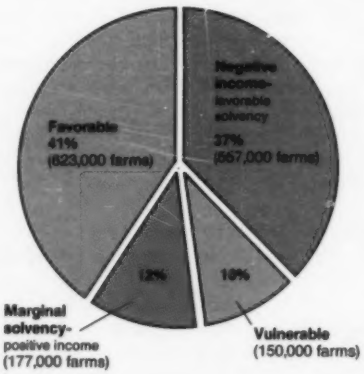
When broken down by regions, survey data indicate that farm income problems were most prevalent in the Southern Plains, Southeast, and Mississippi Delta. In each of these areas, more than 60 percent of the farms had a negative net cash farm income (50 percent or more farms were in the negative income-favorable solvency category and 10 to 11 percent were in a vulnerable position).

Debt problems were greatest in the Northern Plains, Great Lakes states, and Corn Belt. One-quarter to one-third of the farms in these regions fell into the marginal solvency or vulnerable categories, with debts in excess of 40 percent of assets.

Average net worth was highest in the Rocky Mountain and Pacific regions, and lowest in the Great Lakes states, followed by the Corn Belt.

**Forty-One Percent of Survey Farms Rate Favorable and 10% Are Vulnerable Based on Income and Solvency Measures**

**Distribution of farms by financial condition:**




Source: 1986 Farm Costs and Returns Survey.
The income measure used is net cash farm income; marginal solvency indicates a debt-asset ratio of 40% or higher.

When income and debt criteria are combined, the Southern Plains had the smallest percentage of farms in a favorable position (27 percent) and the Northern Plains the largest percentage (52 percent). The percentage of vulnerable farms ranged from a low of 7 percent in the Northeast and Appalachia to a high of 11 percent in most of the major grain and livestock regions.

Comparing 1986 survey results with those for 1985 reveals a modest improvement in financial conditions in the Great Lakes states, Northern Plains, Delta, and Mountain regions. The percentage of farms identified as vulnerable increased in the Southeast and Appalachia, and remained steady in the Corn Belt.

Net farm income data indicate that, in terms of profitability, farms are probably weakest in the Southern Plains, says Morehart. This same region, however, had the second highest average off-farm income ($35,095 per farm). The Pacific region led in off-farm income, with an average $44,767 per farm.

Similar differences in financial conditions are evident when survey data are examined according to farm type, Morehart notes. Nursery-greenhouse farms probably had the best statistics, with 58 percent in the favorable financial category and only 3 percent listed as vulnerable.

Among dairy farms, 60 percent rated favorable, but 8 percent were in a vulnerable position. Poultry operations and the combined tobacco-cotton group both had favorable ratings of 51 percent and vulnerable ratings of 9 percent. Although cash grain farms followed closely in the favorable category at 47 percent, a relatively high 13 percent were vulnerable.

In strictly cash flow and profitability terms, poultry farms appeared to have the strongest financial performance in 1986, Morehart says. Vegetable, fruit, and nut farms had the highest average net worth. Profitability measures were poorest for cash grain farms.

Between 1985 and 1986, the percentage of crop farms in a vulnerable position increased slightly, with the exception of nursery-greenhouse farms. The opposite occurred for most livestock categories. □

*[Based on information provided by Mitch Morehart, Jim Johnson, Liz Nielsen, and other economists of the Agriculture and Rural Economy Division, Economic Research Service.]*

***See related story next page.***

**The Distribution of Farms in Different Financial Conditions Varies by Farm Size, Region, and Commodity**

| | Financial condition | | | |
|---|---|---|---|---|
| | Favorable (pos. income + favorable solvency) | Negative income-favorable solvency | Marginal solvency-positive income | Vulnerable (neg. income + marginal solvency) |
| | *percent of farms in each financial condition* | | | |
| **Farm size** | | | | |
| $500,000 and up | 49 | 10 | 33 | 7 |
| $250,000-$499,999 | 53 | 9 | 32 | 7 |
| $100,000-$249,999 | 55 | 9 | 27 | 8 |
| $40,000-$99,999 | 56 | 11 | 22 | 10 |
| $20,000-$39,999 | 58 | 22 | 10 | 10 |
| $10,000-$19,999 | 49 | 35 | 6 | 10 |
| $9,999 or less | 22 | 66 | 1 | 11 |
| **Region** | | | | |
| Northeast | 41 | 45 | 8 | 7 |
| Great Lakes states | 42 | 26 | 20 | 11 |
| Corn Belt | 50 | 25 | 15 | 11 |
| Northern Plains | 52 | 15 | 22 | 11 |
| Appalachia | 47 | 41 | 5 | 7 |
| Southeast | 31 | 53 | 6 | 11 |
| Delta | 29 | 52 | 9 | 10 |
| Southern Plains | 27 | 56 | 5 | 11 |
| Mountain | 37 | 44 | 11 | 8 |
| Pacific | 34 | 49 | 6 | 11 |
| **Farm type** | | | | |
| Cash grain | 47 | 21 | 19 | 13 |
| Tobacco, cotton | 51 | 28 | 11 | 9 |
| Vegetable, fruit, nut | 36 | 48 | 6 | 11 |
| Nursery-greenhouse | 58 | 28 | 11 | 3 |
| Other crop | 31 | 51 | 6 | 12 |
| Beef, hog, sheep | 34 | 51 | 6 | 9 |
| Dairy | 60 | 9 | 23 | 8 |
| Poultry | 51 | 16 | 23 | 9 |
| Other livestock | 21 | 61 | 2 | 16 |

Source: 1986 Farm Costs and Returns Survey.
The income measure used in these statistics is net cash farm income; marginal solvency indicates a debt-asset ratio of 40% or higher. Adding across, numbers may not total exactly to 100% because of rounding.

*Cotton producer Carl Weiler of Phoenix, Ariz.: "I don't think anyone likes the time involved, but it takes time to get the necessary data."*

*Ohio farmer Tim Hartsock: "How are we going to get the information back unless we give it out?"*

## Taking Agriculture's Pulse Helps Answer Crucial Questions

Larry Beard of USDA's National Agricultural Statistics Service calls it, "Taking the pulse of agriculture."

Like a regular physical examination by a doctor, he says, it's something that needs to be done, regardless of the apparent condition of the agricultural sector.

He is talking about the annual Farm Costs and Returns Survey, which is conducted by the statistics service and its state offices.

Jim Johnson and Mitch Morehart, two Economic Research Service economists who analyze the survey results, explain the need for the survey by referring back to the time before the first one was taken for 1984.

There were many questions then about what was happening in agriculture—and within different subsectors of farming—from lawmakers, farm organizations, extension and university people, and the public. The information—the data—to answer those questions just wasn't available.

What difference does the survey make?

"It's the difference between everybody speculating and arguing about what's going on in agriculture, versus everyone having a detailed set of reliable data collected from farmers themselves," says Morehart. "The data may not tell us the best direction to go. That's still a political matter. But good, hard information helps us separate fact from fiction and may prevent some serious mistakes from being made."

Next February and March, interviewers will be back out in the field asking about 25,000 farmers and ranchers to participate in the fourth annual Farm Costs and Returns Survey. This one will collect data covering 1987.

Analysts and enumerators (as the interviewers are called) have already talked to a small sample of producers, testing the survey to make sure the questions are clear and can be easily answered from the records most farmers keep. Morehart was one of those conducting the tests. "Yes, this survey tries to get everything," he says, "but I found that farmers generally aren't reluctant to provide the information."

Morehart and Beard have a simple message for farmers: "We ask these questions because the information is needed. We depend on your cooperation."

Here, for our farm readers, are some of the facts they want you to know about the survey:

- It's a detailed survey, requiring at least an hour to conduct. The enumerators are instructed to set up a time convenient for you, so they don't interrupt your work.
- The survey is voluntary. You are not required to participate, but your participation is critical. Each participant was selected by a statistical sampling procedure to represent many other farmers with similar operations. No one else can take your place.
- The enumerators were hired and trained to conduct the survey by your state agricultural statistics service. They live and work in your local area.
- Your answers are completely confidential. Your state office will feed the data into a computer, and will then destroy the original questionnaires so that no one can trace any answers back to you or your operation.
- If you're a participant in the survey, your state office will automatically send you a summary of the results. Other information will be released by USDA in various reports as results are compiled. This information is available directly from USDA and is also reported by many farm newspapers and magazines.
- The information serves many needs. The survey provides cost of production data which help policymakers understand the costs of farming. Other data help researchers track how inputs are being used and analyze the financial situation in the farm sector, how it's changing, where problems are located. The survey also provides information helping lenders evaluate their credit policies, and helping farmers understand what's happening within their region and their subsector of agriculture.

"Our job as USDA analysts is to be objective and to derive conclusions that are supported by the data," says Morehart. "Researchers in government and universities, extension people, lawmakers, and analysts for farm organizations then find that disagreements over facts are fewer, and policy debates can concentrate on what needs to be done."

He concludes: "The data are going to tell the same story no matter who does the analysis, but different groups may be interested in different parts of that story."

*Georgia farmer Oren Childers: "They get the information to the people who really need to know, who make the decisions in agriculture."*

*John Ross of the California Cattlemen's Association: "Having the information doesn't guarantee we won't get (unfavorable) policies....but it helps those of us in agriculture to make our case."*

## 'We Need to Be Informed,' Farmers Say

To get another perspective on the Farm Costs and Returns Survey, *FARMLINE* talked directly to some farm members of a special review board charged with evaluating the way USDA collects and uses cost of production information. The board grapples with such issues as what information is needed from farmers, how questions are asked, and how results should be presented and interpreted. Its recommendations go to Congress and the Secretary of Agriculture.

We questioned four of the members: Tim Hartsock, who grows corn and soybeans on his farm in Chillicothe, Ohio; Oren Childers, a peanut, corn, soybean, and watermelon farmer in Cordele, Georgia; Carl Weiler of Phoenix, Arizona, a cotton and produce grower; and John Ross, executive vice president of the California Cattlemen's Association.

Here are their responses to the questions we posed.

*Granted researchers need this information, but why should farmers want to give it to them?*

**Hartsock:** As farmers, we need to be informed about the structure of agriculture and the costs of production of these various commodities. How are we going to get the information back unless we give it out?

**Ross:** The California cattle industry is changing, and the information from the survey helps us understand how it is changing and what some of the alternatives might be for us to stay in business. When you go through a period like the one we've seen recently, it should cause us to think about our industry and how we got into the position we're in. Hopefully, it leads farmers and ranchers to start asking, 'Am I doing this right? Is this the proper way of looking at my operation?'

**Childers:** The statewide information lets you know where you stand in comparison with other producers in your state, and how your state compares with respect to other areas of the country.

*How does this survey relate to your concerns about farm policy and policy's impact on farmers?*

**Childers:** They (the surveys) have helped indirectly by getting this information to the Hill and letting them know the situation in agriculture. They get the information to the people who really need to know, who make the decisions in agriculture.

**Hartsock:** We (members of the review board) look at the survey information from a layman's point of view, applying what I like to call a 'farmer's common sense view.' One of the things we're doing is seeing to it that the information is presented in a form that even an urban congressman can understand and not be misled.

**Ross:** Any information can be used either for or against farmers, it depends on whose hands it's in. The conclusion some may draw is that we'd be better off without this information. This is what I call the 'ostrich view of the world.' The trouble is that even if this information were not available, we'd still get policies put in place that would work against agriculture. Having the information doesn't guarantee we won't get such policies, but it helps those of us in agriculture to make our case.

*But why so many questions, why are so many details needed?*

**Weiler:** The survey questions don't bother me. I don't think anyone likes the time involved (in conducting the survey interviews), but it takes time to get the necessary data. . . The details are important because producers' generalizations may tend to overstate or understate their financial situation.

**Ross:** Three years ago, we got very concerned about the financial situation in agriculture and the ability of lenders to deal with it. That's when these surveys started. Now we have a base of information which we can use to begin to address questions like: Should assistance be targeted? To whom? Are there segments of agriculture that cannot be saved? We can look at the incidence of debt and profits in different areas of the country, different sales classes, types of farms. We can consider how various sectors will have to change.

*And how does that benefit your members, Mr. Ross?*

**Ross:** We can help our members through newsletters, magazines, and seminars (and) now we have solid information from which to make our arguments, issues we can raise in talking to Congress about what kind of legislation we need, both at the national and state level.

*How should a farmer prepare for the survey?*

**Childers:** When they go into detail, you really need your records.

**Hartsock:** A farmer should have his account summaries available, and his inventories.

## Jobs Found, But Transition Hard for Ex-Farmers

Many farmers forced from their land by financial troubles are finding jobs off the farm and building new lives, says a study done at North Dakota State University.

But the transition hasn't been easy. It has taken many ex-farmers out of their communities, and in some cases out of the state, in search of employment.

Economist Larry Leistritz, who directed the study, says that "most displaced farmers in North Dakota have been able to obtain alternative employment. About 83 percent were employed at the time of the survey in September 1986, and about 61 percent reported a job search of less than 3 months."

That was a higher job-finding average than for displaced workers nationwide. "However, about 41 percent reported that they had to move to other areas to find work, whereas only 14 percent of the nationwide sample of displaced workers had relocated," he says.

But success at finding work hasn't smoothed over all the stress many felt upon leaving a way of life.

"Loss of the farm and the subsequent transition to a new occupation had a substantial effect on the personal lives of most of them," says Leistritz. "The former farmers also reported experiencing depression, marital and family conflict, and divorce at rates two to three times those of current farmers. More than 90 percent of those reporting these problems felt that they were a direct or indirect result of the economic stress in agriculture."

In many, perhaps most, instances, farmers and their families are making their adjustments alone.

"Although many agencies have launched programs to assist farmers in the transition to new occupations and residences," says Leistritz, "there is reason to believe that many farm families have not been reached."

The state job service was the agency contacted most frequently (by 34 percent), followed by the county social services office (18 percent), and churches (15 percent). But 31 percent of the displaced farmers had not contacted any agency.

And their efforts to build a new life are being forged upon a fragile financial foundation.

"The financial resources of most displaced farm families are quite limited," says Leistritz. "The median family income for this group after being displaced was $18,000, and about 30 percent reported incomes of less than $10,000."

Moreover, about one-third said their debt—in the form of farmland they are still paying for, among other things—currently exceeds the value of their assets, and another 17 percent reported a net worth of $10,000 or less.

"Nevertheless, about 63 percent felt that they were better off financially than when they quit farming," Leistritz notes.

The study suggests that education may have had a hand in helping former farmers find jobs. "Most displaced farm operators were younger than the average of the farm population and had higher levels of education and larger households," says Leistritz. "These demographic characteristics stem from the fact that a high percentage began farming during the 1970's."

The majority of the displaced farmers had operated farms similar in size and in commodities produced to those of current farm operators. The difference was in the amount of debt. Many had debts that far exceeded the value of their assets, so they could not pay off all their debts even after selling their farms.

"Overall, 32 percent of all loans were not paid in full when the farming operation was liquidated," says Leistritz. "These unpaid liabilities represent substantial losses for some creditors."

He says that about 28 percent of the total value of the displaced farmers' loans were uncollectible even when the business was liquidated. Unsecured creditors suffered even heavier percentage losses—74 percent of their claims proved uncollectible.

For the farmers themselves, outstanding loans weren't the only financial concern, says Leistritz. "Contingent tax liabilities can be a substantial problem for those attempting to liquidate a farm operation. About 42 percent of the ex-farmers reached in the survey indicated that liquidation had resulted in increased liabilities, and another 15 percent were uncertain whether such liabilities might arise. The average liability incurred was about $20,000."

Almost half of the displaced farmers have not totally severed their ties to agriculture, though. The most common form of involvement was continued ownership of farmland which was rented to another operator.

Leistritz says the most serious long-term impact from farmers being displaced may be on farm communities rather than families or individuals.

"If large numbers of these young, well-educated farmers leave the community, the implications for public services, and for the future population profile and labor force of the area, will be substantial."

### LEADERS

**In 1985, the United States Was the World's Top Exporter of Agricultural Products—and the Leading Importer, Too**

| Leading exporters | Value of ag exports | Leading importers | Value of ag imports |
|---|---|---|---|
| | *$billions* | | *$billions* |
| United States | 30.5 | United States | 21.3 |
| France | 16.5 | West Germany | 21.0 |
| Netherlands | 15.2 | USSR | 18.1 |
| West Germany | 10.0 | Japan | 17.1 |
| Brazil | 9.3 | Italy | 14.8 |
| Australia | 8.1 | United Kingdom | 13.6 |
| Canada | 7.0 | France | 12.6 |
| United Kingdom | 7.0 | Netherlands | 10.5 |
| Italy | 6.1 | Belgium-Luxem. | 7.1 |
| Belgium-Luxem. | 5.9 | Canada | 4.7 |
| Argentina | 5.7 | Saudi Arabia | 4.1 |
| Cuba | 5.2 | Egypt | 3.7 |
| Denmark | 4.7 | Hong Kong | 3.5 |

Data for calendar year 1985, provided by Economic Research Service economist Art Mackie from statistics published by the Food and Agriculture Organization, United Nations.

# Wanted: Policies to Cope With Differences in Farming Regions

Off-farm jobs are fairly common in agriculture, but California farmers are a special case. Of those whose primary occupation is outside of agriculture, about one of every four holds down a managerial or professional position, a rate higher than that for the U.S. population as a whole.

In the upper Midwest and Plains regions, younger farmers tend to be well educated but are less frequently employed off the farm.

In the Mississippi Delta, education levels and total incomes are generally lower, and more farm families receive some income from public assistance or Social Security than in other regions.

This is part of the portrait of diversity that emerges from a recent analysis of U.S. agriculture. It's a portrait which suggests that agricultural and rural policies may be ineffective, or worse, if they ignore regional differences in off-farm employment, education, income, and reliance on farming.

The analysis, prepared by economists Matthew Smith and Fred Hines of USDA's Economic Research Service, examined nine selected farming areas, ranging from parts of California to the Corn Belt and the Mississippi Delta.

"Farms and the socioeconomic characteristics of the people who live on them differ dramatically from one part of the country to another," says Smith. "These differences are prominent from one region to another, as well as between farm and nonfarm people in the same region."

Among other things, he says, farms vary in size, commodities produced, natural resource endowments, and the extent to which they are relied upon to support the farm household. Farm people differ in their levels of education, types of off-farm employment, and levels and sources of income. These differences give regional dimensions to farming in the 1980's.

For example, in the Midwest and Northern Plains, "heavy reliance on income from sales of government supported crops, large numbers of financially vulnerable midsize farms, and fewer alternative sources of income have led to the most widespread farm financial distress and the most persistent calls for agricultural policy remedies," says Smith.

*Policies may be ineffective if they ignore regional differences in farms and farmers.*

In other parts of the country, he goes on to say, "income problems among farm households are in many cases linked at least as closely to low earnings in manufacturing as in agriculture. Still other parts of the farm population are rather affluent and unaffected by federal farm policies."

**Impacts of Policies**

According to economist Hines, the varying circumstances in which the farm population lives and works help determine the impact of farm and rural development policies.

In some regions of the United States, he says, "farm policy remains highly significant to farm households and rural communities as a component of income and economic development. In others, farm people themselves are likely to be affected much more by policies directed to all residents rather than by policies specifically targeting the agricultural sector."

The nine areas chosen for analysis by the economists contained nearly 50 percent of the 1980 farm population and nearly 45 percent of all U.S. farms in 1982 (based on the 1982 Census of Agriculture). These regions, and some of their principal characteristics, are shown on the accompanying map, page 13.

Classified by sales, the distribution of farms varies widely across the regions. The proportion of farms with annual sales of less than $10,000 ranges from under 17 percent in the Western Corn Belt-Northern Plains area to over 70 percent in the Southeast Piedmont and Eastern Highlands. The proportion of farms with sales of $250,000 or more varies from less than half a percent in the Eastern Highlands to almost 12 percent in the heavily urbanized California Metro area.

Midsize farms with annual sales between $40,000 and $250,000 are most common in the Wisconsin-Minnesota Dairy, Core Corn Belt, and Western Corn Belt-Northern Plains regions. These farms make up from 41 to 48 percent of all farms in these areas and account for between 54 and 65 percent of all farm sales.

In the Delta, Western Great Plains, and California Metro regions, production is dominated by farms with $250,000 or more in annual sales.

Smith notes that the extent of off-farm employment of farm operators closely follows regional differences in farm size. Areas populated mostly by smaller farms tend to depend more heavily on off-farm employment and income, while midsize and larger farms are more likely to require a full-time operator.

"Of farms reporting no off-farm work, the highest proportions (about 55 percent or more) are found in the Wisconsin-Minnesota Dairy and Western Corn Belt-Northern Plains regions," Smith says. "The lowest proportions of full-time farm operators are found in the Southeast Piedmont and Eastern Highlands regions, where only about a third of operators report no off-farm work."

**Dependence on Farm Income**

Reliance on farm income followed a similar pattern, ranging from a high of 47 percent of total income in the Western Corn Belt-Northern Plains to a low of 15 percent in the Eastern Highlands.

"Income from farming and, in particular, income derived from commodities directly affected by government policies is extremely localized in its overall importance to the farm population," says Smith. "In some regions, notably the Midwest and Northern Plains, farm income remains very important to farm households in the aggregate and provides most of the income of the majority of farm households."

It is in these areas—in which farmers also typically comprise a relatively high percentage of the local population—that agricultural commodity policies have their greatest potential impact on the well-being of farmers and other rural people, and in which agricultural policy measures are most effective in enhancing rural incomes.

In the Midwest and Plains areas that rely most heavily on agriculture, median incomes of the farm population tend to be somewhat below the U.S. average even in profitable years, but incomes are fairly comparable to those for local nonfarm households. The lowest incomes among the farm population are found in areas with less overall dependence on farm earnings: the Delta, Eastern Highlands, and Coastal Plains. In these lowest-income farm regions, agriculture plays a supplemental role in household incomes, and in two of them (the Eastern Highlands and Coastal Plains) the bulk of agricultural production consists of products not covered by government price support programs.

That means, Smith says, that "present farm commodity price support policies are not well suited to addressing the most severe income problems of the farm population."

In fact, he says, "the diversity of U.S. agriculture and farm people, from one region to the next and from one farm or household to another, has important implications for public policy. Differences among farms and farmers influence the potential effectiveness of alternative farm policy and rural development strategies."

For instance, the diversity factor makes it critical to "target" vocational training and other assistance to farm operators needing to increase off-farm earnings. Regions that are typified by large numbers of small farms exhibit great diversity in the education levels, occupations, and incomes of the farm population.

The California Metro region, characterized by its urban setting and ready access to off-farm employment, has significant numbers of very small farms. The farm population is largely well-educated, employed in professional jobs, and earning a high income. The Eastern Highlands has also traditionally been thought of as a region of small farms, but the farm population there tends to have less education, face a less successful nonfarm sector, be more heavily employed in manual occupations, and earn much lower total incomes. Combining elements of both is the Southeast Piedmont, which has large numbers of both poorly educated and highly educated farm people, and above-average employment in both manual and professional occupations.

**Coping With Diversity**

Thus, strategies that focus on some aspect of small farms will have to contend not only with the diversity of the small farm population from one region to the next, but also within the regions, says Smith.

That's because there is not a "small farm problem," but different problems in different areas, he adds.

Moreover, the impact of any agricultural policy reforms that might be designed to target federal commodity program benefits to midsize farms will also vary by region.

"They will have the greatest impact on the Wisconsin-Minnesota Dairy and two Corn Belt regions, which have a high overall dependence on farm income, high proportions of farm households dependent on farming for most of their income, and a large proportion of midsize farms producing program commodities," Smith says. "In the Delta, despite extremely high reliance on sales of government-supported crops, there are relatively fewer midsize farms, a lower share of farm households dependent on farm income, and a lower overall dependence on income from farming. In the Western Great Plains, despite high reliance on income from farming and a high proportion of midsize farms, sales of program commodities are less important, and net income from the major product (cattle) could actually be hurt if policy changes increase feed costs."

And farm population characteristics also influence the potential effectiveness of nonagricultural policies.

"Job retraining programs created in response to farm financial distress would likely be focused on the farm populations of the Midwest and Northern Plains," Smith says. "However, these are already among the best-educated segments of the farm population, and by some measures are better educated than the U.S. population as a whole."

Actually, the lowest education levels among the U.S. farm population are not found in the commercial farming regions undergoing financial stress in the 1980's, but rather are in part-time farming regions in which chronically low levels of education and income have existed for decades. "A job training effort directed toward present and former commercial farmers in the Midwest and Plains may thus not have as great an impact on future earnings as one focusing on marginal producers in the South," Smith says.

Ultimately, he maintains, economic development that results in more and better jobs for all rural residents is likely to be more helpful to low-income farm households than any agricultural policy measure. That's particularly true in the regions with the lowest median incomes—the Delta, Eastern Highlands, and Coastal Plains—where farmers make up only a small portion of rural residents and earn two-thirds or more of their total income off the farm.

The conclusion, then, seems clear enough: Different types of policies may be needed for different farm regions and for different problems within regions. Policies that attempt to attack the "farm problem" are likely to provide too little—or the wrong kind of—assistance to those who most need it, and to benefit many who don't need help, say the economists. □

*[Based primarily on information provided by economists Matthew Smith and Fred Hines of the Agriculture and Rural Economy Division, Economic Research Service.]*

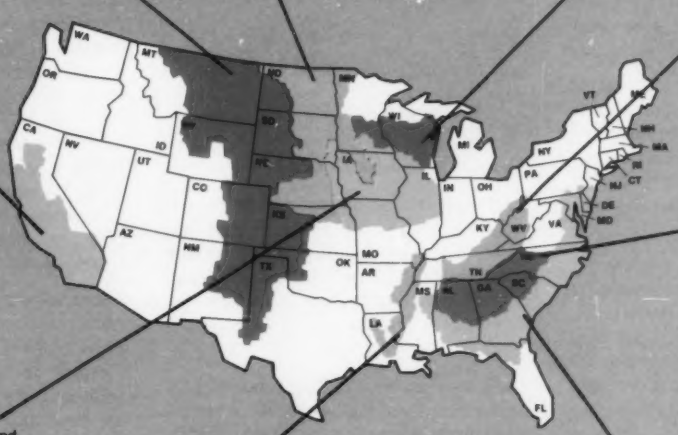
## Some Principal Characteristics of Nine Farming Regions*

**Western Great Plains.** Typically, farms here have large acreages, and low rates of both part-time farming and off-farm employment. The farm population relies more heavily on farming for its income than is the case in seven of the eight other regions.

**Western Corn Belt-Northern Plains.** Most farmers here spend full-time on their farm duties. Overall, this area looks more to farming as a source of income than any of the other regions. Farmers also comprise the largest proportion of the total rural population (nearly a third) in this region.

**Wisconsin-Minnesota Dairy Area.** As its name indicates, it relies heavily on dairy sales. A relatively low proportion of production comes from large farms, and fewer than 30% of farmers hold full-time jobs off the farm. The farm population here is more dependent on income from farming than in many other regions.

**California Metro.** Its farm income is mostly derived from sales of fruits, vegetables, and other crops not covered by the government's major commodity programs. It has a very large average farm size and a high proportion of sales from large farms. Its mobile farm population includes many people who were residents of another county 5 years earlier—almost twice the national average.




**Eastern Highlands.** Characterized by very low sales per farm, it has a very high percentage of total sales coming from small farms. Farm operators are more likely here to work full-time off the farm, so farm households are not very dependent on farm income.

**Southeast Piedmont.** This area relies less on sales of either farm program crops or dairy products than other areas. It surpasses all other regions with the highest proportion of operators having full-time off-farm jobs. Farming provides a below-average portion of total household income, and farmers make up a fairly small part of the rural population.

**Core Corn Belt.** Farm program crops provide most farm sales, and most farmers are full-time operators, which means they do not hold even part-time jobs off the farm. Although the region's farm population (which includes everyone who lives on a farm) earns more than half its income from nonfarm sources, many families rely mainly on farm income, and they make up much of the rural population.

**Delta.** Of all the areas studied, it is the most dependent on sales of farm program crops, which provided 85% of gross farm income in 1982. Although less than 30% of its farm operators work full-time off the farm, the percentage of the region's total farm population employed outside agriculture is about 54%, the national average.

**Coastal Plains.** In many ways, this region is similar to the national average. But it does rely more heavily on sales of farm program crops and less on dairy sales. The percentage of its farmers working full-time off the farm is about average, but the area is less dependent on farm income than most of the other regions.

**U.S. Farming Regions Exhibit Great Diversity in Farm Structure and the Education and Income of Farmers**

| | Average farm size, in acres[1] | Percent of farm operators with full-time, off-farm jobs[1] | Median years of schooling for farm population[2] | Median income of farm households[2] | Percent of farm household income from nonfarm sources[2] |
|---|---|---|---|---|---|
| **Wisconsin-Minnesota Dairy Area** | 202 | 28 | 12.3 | $18,518 | 64.6 |
| **Core Corn Belt** | 294 | 28 | 12.4 | 17,393 | 62.6 |
| **Delta** | 481 | 29 | 10.4 | 13,564 | 70.5 |
| **Eastern Highlands** | 121 | 46 | 10.0 | 13,308 | 84.8 |
| **Western Great Plains** | 2,334 | 24 | 12.5 | 14,856 | 62.2 |
| **Western Corn Belt-Northern Plains** | 622 | 17 | 12.4 | 14,822 | 52.6 |
| **Coastal Plains** | 260 | 37 | 11.8 | 13,774 | 79.2 |
| **Southeast Piedmont** | 143 | 50 | 12.0 | 16,539 | 82.0 |
| **California Metro** | 362 | 41 | 12.6 | 21,067 | 74.8 |
| **United States** | 440 | 38 | 12.3 | 16,634 | 73.0 |

[1]Data are from the 1982 Census of Agriculture. [2]Data are from the 1980 Population Census and apply to people living on farms. Years of education are for those age 25 and older.

*Based on a study of the nine regions by economists Matthew Smith and Fred Hines of USDA's Economic Research Service.

# Appetite for Turkey Still Growing

Today's turkey industry barely resembles the secondary farm enterprise from which it evolved.

Thirty years ago, most turkeys destined for Thanksgiving and Christmas dinner were raised as a sideline by operators of other livestock and crop enterprises. The turkeys were processed in broiler plants during slack periods, primarily for end-of-the-year holiday meals.

Today, U.S. turkey production, processing, and marketing has become a free-standing enterprise of its own. The industry is controlled by a small number of specialized companies. Across the country, the 20 largest firms account for about 80 percent of the total slaughter. These large, integrated firms control their products from hatching to slaughter and finally to the grocery shelf.

Turkey production has been steadily increasing for many years. Economist Mark Weimar of USDA's Economic Research Service estimates that 1987 production will be 3.8 billion pounds, an increase of 17 percent over 1986. This is on top of a 12-percent increase in 1986, says colleague Lee Christensen. In addition, production is expected to continue expanding at a rate of 6 to 7 percent next year, adds Weimar.

While some of this increase may build up processors' frozen stocks, Americans are still eating more turkey. In 1935, per capita consumption weighed in at 1.7 pounds. By 1960, consumption had more than tripled, reaching 6.1 pounds. By last year, it had again doubled, rising to 13.4 pounds—almost 8 times the per capita level 50 years ago. This year, USDA is forecasting consumption of more than 15 pounds a person, and in 1988, almost 17 pounds, says Weimar.

What happens if the industry overexpands? "If producers fail to make money this fall—the traditional, profitable period—we might see a leveling off of production or something of a contraction. Alternatively, the industry may willingly absorb lower prices until demand catches up to the supply," Weimar explains.

*Special products, such as luncheon meats and roasts, accounted for nearly 44% of the turkey produced in a recent year.*

In this respect, the turkey industry may be responding like its broiler counterpart. The broiler industry has kept chicken on consumer's plates by absorbing lower product prices—sometimes offset by technology-related cost savings—rather than cutting production.

The turkey industry is also approaching the broiler industry's level of specialization and integration. Processors often own breeding operations, hatcheries, and growout facilities, as well as processing plants.

Yet there are differences.

### Tracking the Industry

Turkey production is not as confinement-oriented as the broiler industry. Many of the birds are "range raised"—fed to slaughter weights in large, fenced lots and pole-type barns instead of densely populated houses like those used by broiler producers.

It also takes about twice as long to raise a turkey as a chicken. A turkey hen reaches slaughter weight in about 4 months, but a broiler can be sent to market in less than 2 months.

**Turkey Production Quadrupled and Consumption More than Doubled Since 1960**

| | Production | Consumption |
|---|---|---|
| | *bil. lbs.* | *lbs. per capita* |
| 1960 | .95 | 6.1 |
| 1965 | 1.3 | 7.4 |
| 1970 | 1.6 | 8.0 |
| 1975 | 1.7 | 8.4 |
| 1980 | 2.3 | 10.4 |
| 1985 | 2.8 | 12.2 |
| 1987 | 3.8 | 15.1 |

Because the industry is highly integrated, processors control a good deal of the turkeys that are raised. Free marketing—when growers put their birds on the open market without a previous sales arrangement—does exist, but the amount sold this way is relatively small. Most of the turkey production that does not take place in an integrated hatchery-to-retail enterprise comes under some form of production or marketing contract, says Christensen.

These contracts are used to ensure a set rate of production for processors. They also allow growers to know what price they will receive for their birds. Growers in the western regions of the country often own the birds they raise, using marketing contracts to lock in sales prices—and their profits. Most production by Southern growers, on the other hand, is by contract with processors. Under such an arrangement, a processor provides a grower with the young birds, or poults, plus feed supplies and veterinary services. The grower provides the facilities, labor, and management.

Contracts can reduce many of the marketing and production uncertainties, say the economists. Since processors can coordinate the flow of production, they are in a better position to reduce the risks of loss and of price change. But the owners of the birds and growing facilities need large amounts of capital. In addition, supervising and managing operations at different locations can be difficult.

Cost-plus contracts protect the growers against low prices, but they still bear production risks such as the loss of birds or increases in feed costs. Under such contracts, payments to producers are based on estimated production costs and performance levels. The grower is generally paid on a per-unit basis, either per pound or per bird. Efficiency incentives, such as for better feed conversion ratios or low death rates, are often included. Formula-pricing, another form of agreement used in the industry, ties the price received by growers to a specified market quote.

Such contracts, through the use of grower bonuses and contract renewals, allow processors to reward efficient production. The processors also can weed out marginal growers by not offering them new contracts, Christensen says.

**Some Recent History**

As the industry expanded, several other developments occurred. Most of the major technological breakthroughs in production took place several years ago. The most recent innovations have been in processing. New machines have improved slaughtering techniques and increased the efficiency of processors. In addition, the industry has introduced more highly processed, value-added products in order to tap a greater portion of the consumer market. Such products accounted for nearly 44 percent of all the turkey produced in 1985.

As the industry expanded, the processing segment became increasingly concentrated. Now, most of the turkeys and products sold in U.S. grocery stores are provided by relatively few processors. The 1982 Census of Agriculture, the most recent survey available, reported that the top 198 farms sold 53 percent of all turkeys in the United States. The eight largest processors slaughter about 50 percent of total turkey production, say the economists.

Expansion away from whole-bird sales has also altered the long-standing production and slaughter patterns. During the 1960's, 40 percent of the year's slaughter occurred in October in preparation for the holiday season. The January-May period accounted for less than 10 percent of annual output. In 1983, even February slaughter figures, traditionally the annual low, increased to nearly half the November level. Most of the slaughter during the first part of the year, however, is further processed into value-added products, like sliced luncheon meat, roasts, and turkey parts.

Year-round production has allowed turkey hatcheries to operate continuously with only minimum down-time for cleaning and disinfecting. New strains of birds have extended the egg laying period beyond the turkey's natural tendency to lay in the spring and early summer. These improved birds can lay better in any season. Producers use environmental controls, such as lighting, temperature, and humidity, to further encourage egg production.

By increasing the number of birds they can move through their facilities (most growout houses raise two broods—or crops—each year), producers have become more efficient and spread their operating costs over a greater level of production. But facilities are only one of the four major items affecting production costs. Other major costs are the poults, the feed it takes to grow them, and the labor it takes to feed and care for them.

## North Carolina Top Turkey State

Where are U.S. turkeys raised? According to economist Lee Christensen of USDA's Economic Research Service, about 43 percent of the turkey produced in 1986 came from three states. North Carolina, the number one producer, is followed by Minnesota and California.

According to the Census of Agriculture, the South Atlantic region was home to the largest turkey farms—operations there averaged 40,000 turkeys. The West North Central and the Western regions were close behind.

Regional shifts in turkey production have been influenced by various changes in the costs, and relative profitability, of turkey operations. According to a 1985 USDA study, the Midwest initially benefited from abundantly available, inexpensive feeds, but many producers redirected their resources into more profitable operations when the price of grain rose in the 1970's. At the same time, the South, with less productive land and a good supply of low-cost labor, found turkeys to be a profitable enterprise.

**Keeping Costs Down**

Improved feed efficiency, better housing and management, and greater labor productivity have all helped keep the industry's costs down. For instance, a 1985 USDA study of the industry reported that a farmworker putting in 2,000 hours in 1981 could have raised 500,000 pounds of turkey. The same amount of time worked by a farmer in 1945 resulted in production of only 15,267 pounds a year.

Lower feed costs, the largest production expense, have been another benefit for the industry. In 1984, feed accounted for nearly two-thirds of the cost of production on a live-weight basis. Since then, declining grain prices have reduced feed costs about a third, says Christensen.

Grain prices are still relatively low. As long as they stay that way, the industry should have the incentive to continue producing at current levels or to expand.

As for the immediate future of the industry, the economists say we will have to wait and see." With large supplies of turkey now in cold storage, and sizable supplies of all red meats and poultry, prices will be depressed. Many producers may lose money in the next 6 to 12 months, say the economists. Should energy and fuel costs climb and grain prices start to rise, further pressure would be placed on the industry. If this happens, we could see a dampening of the production increases expected in 1988, the analysts say. □

*[Based primarily on information provided by Lee Christensen and Mark Weimar, Commodity Economics Division, Economic Research Service, and Ron Sitzman, National Agricultural Statistics Service.]*

# Policymakers Ponder Shifts in Excess Capacity

Do we need "excess capacity" in U.S. agriculture, and if so, how much? What should be done with the amount that might not be needed? Such questions are receiving increased attention in these times of significant overproduction.

The nation's farmers obviously have the capability of producing a much greater supply of the major crops than the commercial markets require at this time. Excess capacity has been evident nearly every year since the end of World War II. In 1986, it was at a record level, in both number of acres and value of potential production. The recent high levels are due, in large part, to the decrease in exports, economists say.

"A certain amount of excess capacity may be needed because of variations in yields and weather," says Dan Dvoskin, until recently an economist with USDA's Economic Research Service. Some economists view excess capacity as a necessary reserve for lean years or the future, he adds.

A recent ERS report by Dvoskin defines excess capacity as the difference between "potential supply" and "commercial demand." Dwight Gadsby, another ERS analyst who has been studying excess capacity, explains that potential supply for any given year is actual production, plus imports, plus potential output from acreage that has been idled in government reduction programs.

Commercial demand means total use of a commodity, minus "noncommercial exports," he says. Noncommercial exports are the quantities of commodities sold or distributed through various government export credit and food donation programs that would not have been sold in the absence of those programs. (The ERS study assumed that about 70 percent would not have been sold or distributed without the programs.)

### Overall Rate About 9 Percent

In 1986, U.S. agriculture as a whole had excess capacity estimated at nearly 9 percent. The level was about 22 percent, however, for the seven major crops—wheat, corn, soybeans, cotton, sorghum, barley, and oats—ERS statistics indicate. Other commodities with excess capacity were tobacco, rice, peanuts, rye, and dairy products. The previous high point for excess capacity occurred in the 1960's.

The commodities with excess capacity are basically those that are the subject of agricultural policy in this country.

*Food security is cited as a reason why some excess capacity should be maintained.*

Excess capacity also can be expressed as an acreage equivalent, which in 1986 was more than 60 million. And cropland is of course not the only resource involved in the measurement of excess capacity. However, the contributions of other production factors—such as labor, capital, and management—remain to be studied and measured the way cropland has been, Gadsby notes.

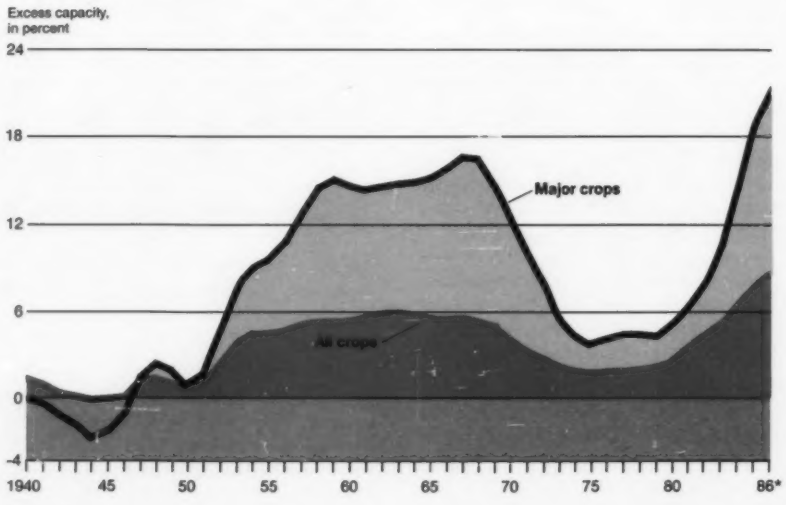
Wheat has one of the highest levels of excess capacity. In 1986 it was an estimated 782 million bushels, or 31.1 percent. Production was 2.09 billion bushels, domestic use 1.11 billion, exports 975 million (including noncommercial exports), and potential production from idled acres 423 million.

Gadsby notes that despite declines in recent years, the United States still is exporting more than 17 percent of its agricultural output. He also points out that U.S. agricultural obligations and export markets have grown significantly in the last 40 years, since approximately the end of World War II. "The role of the U.S. farm economy in the world remains immense," he says, "and the current excess capacity reflects a capability to meet unexpected demands if necessary."

### Price Supports Play a Role

One factor influencing excess capacity is government support of agricultural prices above market-clearing levels, economists say. Improvements in technology also can have a substantial effect.

**Excess Capacity, Based on a 7-Year Moving Average, Has Increased Sharply During the 1980's**




*Preliminary.

Dvoskin notes in his study that "Letting agricultural prices seek their free market level would eliminate excess capacity, but such prices might not be politically acceptable." Thus, programs that aim to assure adequate income through price and income supports often lead to excess capacity at those politically determined price levels, economists point out.

Economists and policymakers have noted a paradox in that government acreage reduction programs put currently unneeded land in reserve, while at the same time price support programs encourage more intensive use of remaining acres.

Gadsby says that understanding and measuring excess capacity is important because of current policy debates about the future of farm income support programs. The 1985 farm bill was designed to meet foreign competition by reducing domestic price support levels to encourage increased exports. To compensate for lower price supports, direct income payments were allowed to increase. This pushed government farm program cost outlays to a record $25.8 billion for fiscal 1986. Dvoskin says that there is "more awareness now than ever before of conflicts and inconsistencies involving policies that both encourage and discourage production."

In the 1940's and early 1950's, excess capacity became visible in the form of growing surplus stocks of commodities, which led to the reintroduction of programs to idle cropland acreage. By the end of the 1960's, most of the excess capacity was in diverted cropland. In the last few years, excess capacity has been almost equally divided between diverted cropland and surplus stocks.

**Demand for Capital Increases**

Production during the 1960's and 1970's, Gadsby notes, was nearly double the levels of the World War II years, with a different mix of inputs. "New capital and technology offset a shrinking labor component, with a mixture of factors representing a much richer proportion of borrowed capital," he says. He adds that there was an increasing demand for capital, from both national and international sources. "In this sense, agricultural and developmental capital has contributed to excess capacity, not only in American agriculture but worldwide as well." And government programs are partly responsible for the stimulus to make use of that capital.

"We have seen in the past that land retirement programs don't eliminate excess capacity because they don't move resources permanently from the agricultural sector," Dvoskin says. In addition, use of fertilizer and improved crop varieties, as well as substitution of land, can offset the output-limiting effect of land diversion, to a certain extent.

Dvoskin adds that land-idling programs can reduce short-run surpluses (excess supply), as they did successfully in the 1960's. Since acreage reduction programs are designed to work in conjunction with provisions to support prices above free market levels, a measurable excess capacity is assured under such policies, Gadsby says.

In the short run, measurable excess capacity might be reduced if exports were to increase substantially. Historically, large short-run increases in agricultural exports have primarily resulted from bad weather that creates production shortfalls in importing countries.

If a substantial long-run increase in export demand for U.S. farm products is unattainable, if the current level of excess capacity is unacceptable, and if the implications of lower commodity prices are also not acceptable, then new uses of the resources contributing to unneeded capacity would have to be considered, Dvoskin says.

**Cutback Goals Hard to Reach**

This year about 70 million acres are idle in various government programs. The idled acreage is greater than the excess capacity total of 60 million acres because cutback programs are not fully effective. ERS economists say that, on average, 3 acres must be removed from production to eliminate the actual output of 2 acres. The reasons for this include: acres taken out of production are likely to be less productive, participating farmers are likely to increase production on their remaining acres by boosting inputs, and nonparticipating farmers are likely to increase the use of all inputs if they anticipate that acreage reductions made by participating farmers will lead to higher commodity prices.

National and international food security is often cited as a reason why some excess capacity should be maintained, Gadsby says. As yet, however, what this "desirable" level should be has not been determined. Reserve capacity also would be available to respond to higher price levels or cost-cutting developments, Gadsby says.

Research on excess capacity is continuing. One of the questions remaining, Gadsby says, is how we can manage excess capacity in the short run without distorting the market system and creating a greater problem with excess capacity in the long run.

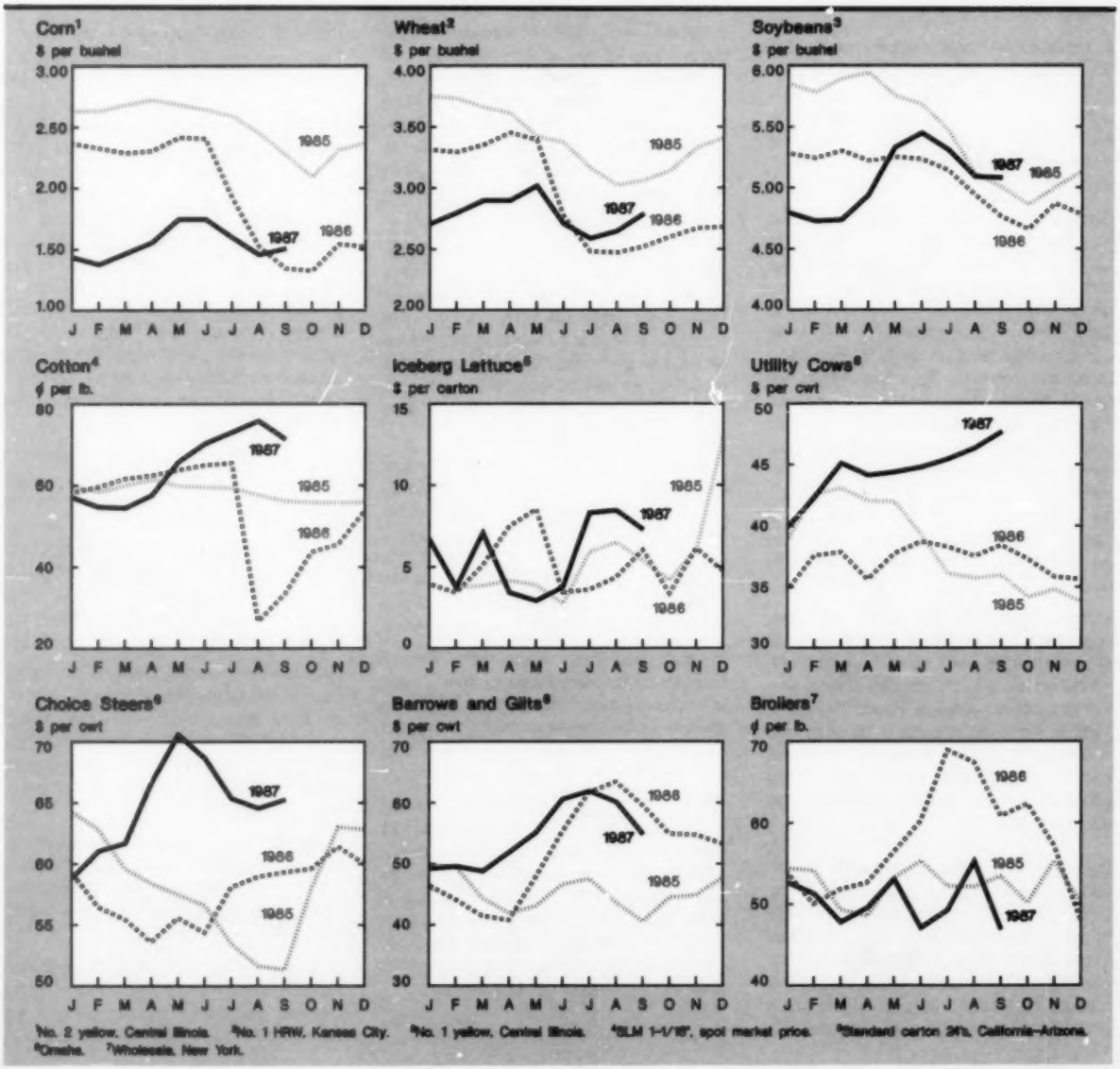
"Several such questions still must be answered before programs and policies can be developed to deal with excess capacity on an efficient, long-term basis," Gadsby says. □

*[Based on information provided by Dwight Gadsby of the Resources and Technology Division, Economic Research Service, and Dan Dvoskin, former ERS analyst.]*

# FARMLINE TRENDS

### Monthly Price Monitor

USDA's September index of farm prices rose 1.6% from August, and was 5.7% above its year-earlier level. Corn rose to $1.51 per bushel, and wheat increased to $2.79, but prices for both were down 23¢-24¢ from spring peaks. Soybeans held above $5 per bushel. Cotton averaged 71.4¢ per lb. — down from August but more than double its year-earlier level. Among meat animals, utility cows gained $1.31 to another high of $47.68 per cwt. Choice steers increased to $65.29, while barrows and gilts dropped below $55 after 3 months of $60-plus prices. Broilers, at 46.9¢, were down 8¢ per lb. from August. Prices were above year-earlier levels for all commodities except pigs and broilers. Prices shown are monthly averages.




[1]No. 2 yellow, Central Illinois. [2]No. 1 HRW, Kansas City. [3]No. 1 yellow, Central Illinois. [4]SLM 1-1/16", spot market price. [5]Standard carton 24's, California–Arizona. [6]Omaha. [7]Wholesale, New York.

# U.S. Shares in Global Perspective

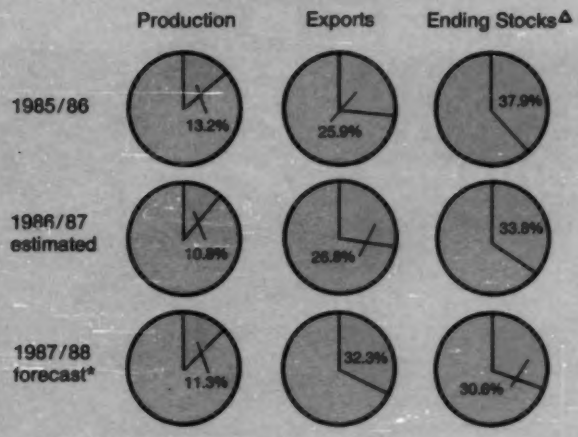
The global problems facing U.S. export commodities became increasingly evident from the early to the mid-1980's. Analysts pointed to our shrinking share of world exports and mounting share of the world's year-end inventories, or "ending stocks." Today, it's time for another look at this share data.

Based on the latest forecasts for the current 1987/88 season, the United States now produces a slightly smaller share of the world's wheat, coarse grains, and soybeans than it did in 1985/86. With the exception of soybeans, however, our export shares have improved substantially. With coarse grains, for example, the United States is expected to capture close to half the world's exports in 1987/88, up from less than 40% in 1985/86.

U.S. efforts to reduce its share of the world's year-end stocks are also paying off. Compared with 1985/86, the U.S. stockholding burden is expected to be down for wheat and soybeans—and down sharply for cotton. For coarse grains, though, the U.S. share is forecast to remain above 70% this year.

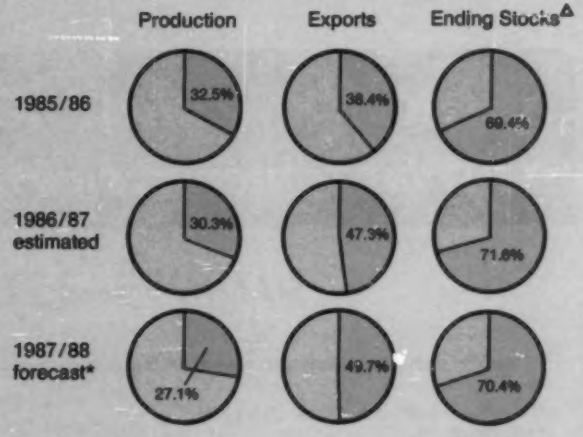
## Wheat

**U.S. Share of World Wheat:**




## Coarse Grains

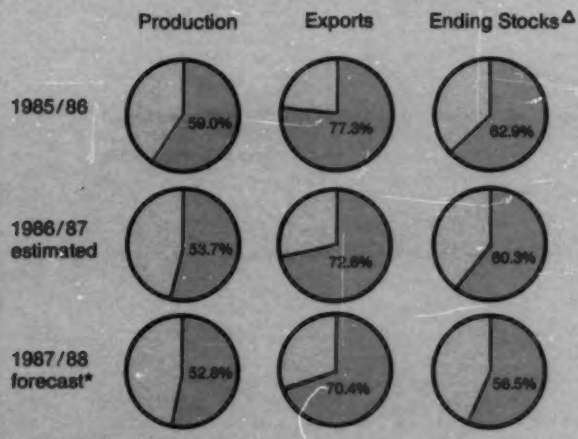
**U.S. Share of Coarse Grain:**




Includes corn, sorghum, barley, oats, rye, millet, and mixed grain.

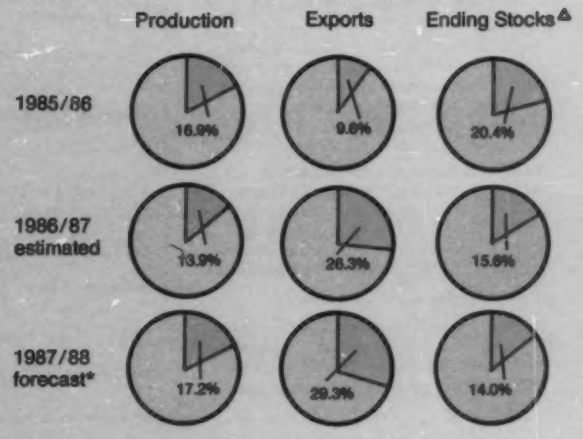
## Soybeans

**U.S. Share of World Soybean:**




## Cotton

**U.S. Share of World Cotton:**




*Based on USDA's mid-October world supply-demand estimates.
△Ending stocks are year-end inventories.

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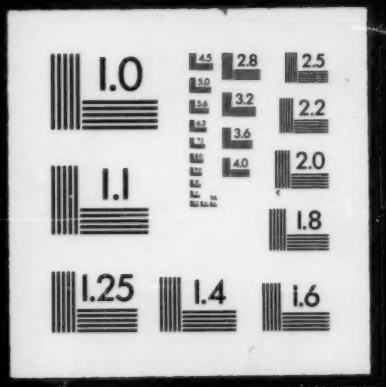
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